

Amendments To The Drawings:

None

Remarks

This Amendment is in response to the Office Action dated **February 3, 2009**.

Rejections

35 U.S.C. §103(a)

Claims 1-3 and 5-13 have been rejected under 35 U.S.C. § 103(a) as being obvious over Harrell et al. US 4,839,412 alone or in view of Hall US 6,025,422.

Claim 1 has been amended.

Claims 2, 3, 5 and 8-10 have been canceled. The limitations recited in claims 2, 3, 5 and 8-10 have been incorporated into claim 1. Further support for the amendment to claim 1 can be found at least from paragraphs [0037] and [0046], and from Table 1, examples 1 and 2. No new matter has been added.

Claim 1 now recites, inter alia, an insulation composition for halogen-free automotive cables, including a matrix resin, 50-200 parts by weight, based on 100 parts by weight of the matrix resin, of a metal hydroxide flame retardant, and 0.5-20 parts by weight of an antioxidant, in which the matrix resin consists of 1-80 parts by weight of a polyethylene resin, 1-80 parts by weight of an ethylene copolymer resin, and 1-20 parts of a terpolymer of ethylene, acrylic ester and maleic anhydride, wherein the terpolymer of ethylene, acrylic ester and maleic anhydride consists of 1 to 80 parts by weight of ethylene, 1 to 50 parts by weight of acrylic ester and 1 to 50 parts by weight of maleic anhydride.

The antioxidant includes at least one thioester.

The insulation composition also includes a phenolic metal deactivator.

Both Harrell et al. and Hall employ only a single antioxidant, i.e. Irganox® 1010

which is a hindered phenolic antioxidant.

The combination fails to produce an insulation composition of the type recited in claim 1 as amended wherein a thioester antioxidant is employed in combination with a phenolic metal deactivator.

Applicants have discussed the benefit of employing both an antioxidant and a phenolic metal deactivator. See paragraphs [0039] and [0040] reproduced below:

[0039] If the antioxidant is used in an amount of less than 0.5 parts by weight, it will not show the effect of inhibiting the decomposition of the insulation material. If the antioxidant is used in an amount of more than 20 parts by weight, it will have an effect on other properties, such as thermal deformation. Particularly, it will have an effect on crosslinking reaction so that the desired crosslinking will not be performed.

[0040] If the phenolic metal deactivator is contained in the composition, it is preferable that the deactivator should be contained in an amount of 0.1-3.0 parts by weight based on 100 parts by weight of the matrix resin. If the phenolic metal deactivator is used in an amount of less than 0.1 part by weight, an inhibitory effect on the decomposition of the insulation material by copper ions will not be increased, and if it is used in an amount of more than 3.0 parts by weight, the deactivation of metal will be increased to reduce the effect of the antioxidant.

The combination fails to disclose or suggest the combination of an antioxidant and a phenolic metal deactivator.

Surprisingly, the combination of at least one thioester antioxidant and a phenolic metal deactivator produces an excellent combination of flame retardancy, thermal resistance, hardness, tensile strength and elongation. See Table 2.

Claim 1 as amended is not obvious over Harrell et al. alone or in view of Hall.

Claims 6-7 and 11-13 depend from claim 1 and are not obvious over Harrell et al. alone or in view of Hall for at least the reasons that claim 1 is not obvious over Harrell et al. alone or in view of Hall.

Withdrawal of the rejection of claims 1, 6, 7 and 11-13 under 35 U.S.C. §103(a)
as being obvious over Harrell et al. alone or in view of Hall.

CONCLUSION

Claims 1, 6, 7 and 11-13 are pending in the application. Applicants have addressed each of the issues presented in the Office Action. Based on the foregoing, Applicants respectfully request reconsideration and an early allowance of the claims as presented. Should any issues remain, the attorney of record may be reached at (952)563-3011 to expedite prosecution of this application.

Respectfully submitted,

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